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(57) Abstract :
The present invention discloses a machine learning model for fraud detection in insurance claims, comprising a data preprocessing unit (101), feature extraction unit (102), supervised learning classifier (103), anomaly detection engine (104), deep learning module (105), explainability module (106), and fraud decision output (107). The system integrates supervised, unsupervised, and deep learning approaches for detecting fraudulent claims with high accuracy, adaptability, and transparency. Experimental validation confirms reduced false positives, scalability for real-time claim processing, and clear interpretability, thereby enhancing fraud prevention in modern insurance operations.

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